Gene Symbol	Gene Name	Tissue Specificity	Subcellular Localization	References
ACTA2	Actin alpha 2, smooth muscle	Smooth muscle and myoepithelial cells	Cytoskeleton	45–48
BGN	Biglycan	Cartilage and connective tissue	Extracellular matrix, secreted	47–50
CILP	Cartilage intermediate layer protein	Cartilage	Extracellular matrix	51–53
COL1A1	Collagen type I alpha 1 chain	Ubiquitously expressed	Extracellular matrix	47,48
COL3A1	Collagen type III alpha 1 chain	Detected in several tissues including cervix, uterine, gallbladder, and smooth muscle.	Extracellular matrix, secreted	47,48,54
COL8A1	Collagen type VIII alpha 1 chain	Endothelium of blood vessels. Specifically expressed in peritoneal fibroblasts and mesothelial cells.	Extracellular matrix	47,48,55,56
CST6	Cystatin E/M	Skin	Secreted	57,58
CTHRC1	Collagen triple helix repeat containing 1	Expressed in fibroblasts, smooth muscle cells, bone tissue, and blood vessels after injury.	Secreted	59–61
DDAH1	Dimethylarginine dimethylaminohydrolase 1	Detected in brain, liver, kidney, pancreas, and heart.	Cytoplasmic (Golgi)	47,48,62,63
DDR2	Discoidin domain receptor tyrosine kinase 2	Highly expressed in heart and lung. Detected in brain, placenta, liver, skeletal muscle, pancreas, kidney, and cartilage.	Cell membrane	47,48,64–66
FN1	Fibronectin 1	Widely expressed. High levels in fibroblasts, hepatocytes, epithelial, and other cell types	Extracellular matrix and secreted	47,48,67
GSN	Gelsolin	Widely expressed	Cytoskeleton and secreted	47,48,68–70
MEOX1	Mesenchyme homeobox 1	Expressed endothelial cells. High levels in adipose and breast tissue.	Nucleus, nucleoli, mitochondrion	47,48,71
MFAP5	Microfibril associated protein 5	Widely expressed, high in endometrium and in stromal ovarian tumors.	Extracellular matrix, secreted	47,48,72
MGP	Matrix Gla protein	Expressed in several tissues, high in breast tissue and tubular epithelial cells.	Extracellular matrix, secreted	47,48,73
P4HA1	Prolyl 4-hydroxylase subunit alpha 1	Widely expressed, high in gliomas.	Cytoplasm and extracellular matrix	47,48,74,75
PDGFRA	Platelet derived growth factor receptor alpha	Widely expressed. Detected in platelets, brain, fibroblasts, smooth muscle, heart, and endothelium.	Cell membrane. Cytoplasmic expression in myoepithelial cells	47,48,76
PDPN	Podoplanin	Highly expressed in placenta, lung, skeletal muscle, brain, and lymphatics.	Cell membrane. Localizes to membrane projections such as filopodia, lamellipodia and ruffles.	47,48,77–80
POSTN	Periostin	Widely expressed with highest levels in aorta, stomach, lower gastrointestinal tract, placenta, uterus, thyroid tissue and breast	Extracellular matrix, secreted.	47,48,81–83
PRG4	Proteoglycan 4	Widely expressed with highest levels in liver, cartilage, adipose, and synovial tissue	Extracellular matrix, secreted	47,48,84
PTN	Pleiotrophin	Brain and endocrine. Detected in osteoblasts	Secreted, cytoplasmic	47,48,85,86
S100A4	S100 calcium binding protein A4	Several tissues. Distinct expression in infiltrating immune cells, and various metastatic cancers.	Cell membrane	47,48,87,88
SFRP2	Secreted frizzled related protein 2	Expressed in mesenchymal stem cells. Highest levels in adipose tissue, small intestine and colon	Secreted	47,48,89,90
TCF21	Transcription factor 21	Expressed in cardiac fibroblast and in several tissues during development. Enhanced in placenta, spleen and lung	Nucleus, also nucleolar and cytoplasmic	47,48,91
THY1	Thy-1 cell surface antigen	Expressed in several tissues with highest in smooth muscle, and cerebral cortex	Cell membrane	47,48,92–95
VIM	Vimentin	Expressed in several tissues. Highly expressed in fibroblasts	Cytoskeletal	47,48,96,97
WT1	WT1 transcription factor	Expressed in the kidney and a subset of hematopoietic cells	Nucleus	47,48,98,99

Supplementary Table 1. Cardiac fibroblast specific genes.

List of published genes expressed at high levels in cardiac fibroblasts with their corresponding tissue specificity and subcellular localization.

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